

WHAT IS CLAIMED:

1. An isolated *Bacillus* single-strand binding protein:
 - (i) comprising the amino acid sequence of SEQ ID NO: 176; or
 - (ii) being encoded by a nucleic acid molecule hybridizing to the complement of SEQ ID NO: 175 under hybridization conditions comprising at most about 0.9M sodium citrate buffer at a temperature of at least about 37°C.
2. The isolated *Bacillus* single-strand binding protein according to claim 1 wherein the *Bacillus* species is *Bacillus stearothermophilus*.
3. The isolated *Bacillus* single-strand binding protein according to claim 1 wherein the single-strand binding protein comprises the amino acid sequence of SEQ ID NO: 176.
4. The isolated *Bacillus* single-strand binding protein according to claim 1 wherein the single-strand binding protein is encoded by a nucleic acid molecule that hybridizes to the complement of SEQ ID NO: 175 under hybridization conditions comprising at most about 0.9M sodium citrate buffer at a temperature of at least about 37°C.
5. The isolated *Bacillus* single-strand binding protein according to claim 1 wherein the single-strand binding protein is purified.
6. A DNA-protein complex comprising:
 - a DNA molecule comprising a single-stranded region and
 - a single-strand binding protein according to claim 1 that is bound to the single-stranded region of the DNA molecule.
7. A kit comprising:
 - a container that contains therein either a deoxynucleoside triphosphate or a dideoxynucleoside triphosphate;
 - a container that contains therein a DNA polymerase III-type enzyme complex; and
 - a container that contains therein a single-strand binding protein according to claim 1.